

Serial No. 09/020,716
Group Art Unit: 1638

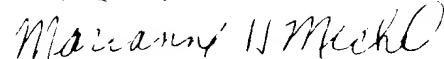
REMARKS

Reconsideration of the present application is respectfully requested. Arguments in the previous responses are maintained. Claims 100-102 and 104 have been canceled without prejudice. Support for "seed protein" is found on page 11, line 15 of the present application.

With regard to the 103 rejection over Rao et al., the applicants submit that the unexpected results provided in the application and in a subsequent 1.132 Declaration overcome any rejection of obviousness. The results demonstrate that not all promoters are functional equivalents as indicated by the Examiner. The endosperm-preferred promoter, gamma zein, produced a greater increase in lysine and methionine than the embryo-preferred promoter, Glb1. Hence, it would not be an obvious modification to substitute one promoter for another. There is no indication in the art to choose an endosperm-preferred promoter, and in fact Falco teaches away from such a choice. "Obvious to try" is not a valid test for patentability, *Hybritech Inc., v. Monoclonal Antibodies, Inc.* (CAFC 1986) 802 F2d 1367, 231 USPQ 81. As summarized above and discussed in detail in previous responses, the specific combination in the present claims is not obvious over Rao et al.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the claims:

Please cancel claims 100, 101, 102 and 104 without prejudice.

Please amend claims 76, 77, 95, 96, 97, 105, 106, 107, 108 and 110.

76. (Twice amended) The method of claim 95 wherein the transformed cereal plant [seed is from] is maize, wheat, rice, or sorghum.
77. (Twice Amended) The method of claim 76 wherein the transformed cereal plant [seed is from] is maize or sorghum.
95. (Amended) A method for increasing the level of lysine or a sulfur-containing amino acid in a cereal plant seed, the method comprises transforming a cereal plant cell with an expression cassette and regenerating a transformed cereal plant to produce a transformed cereal plant seed, wherein the expression cassette comprises a seed endosperm-preferred promoter operably linked to a [plant derived] polynucleotide encoding a plant seed protein [polypeptide], and wherein expression of the plant seed protein [polypeptide] increases the level of lysine or a sulfur-containing amino acid in the transformed cereal plant seed compared to a corresponding non-transformed cereal plant seed.
96. (Amended) The method of claim 95 wherein the seed endosperm-preferred promoter is heterologous to the [plant derived] polynucleotide.

97. (Amended) A transformed cereal plant seed which has been transformed with a [plant derived] polynucleotide to express a plant seed protein [polypeptide] in endosperm of the transformed cereal plant seed, wherein the transformed cereal plant seed exhibits an elevated level of lysine or a sulfur-containing amino acid compared to a corresponding non-transformed cereal plant seed.
105. (Amended) The expression cassette of claim [104] 97 wherein the seed endosperm-preferred promoter is heterologous to the [plant derived] polynucleotide.
106. (Amended) A seed from a transformed cereal plant which has been transformed with a [plant derived] polynucleotide to express a plant seed protein [polypeptide] in the endosperm of the transformed cereal plant seed, wherein the transformed cereal plant seed exhibits an elevated level of lysine or a sulfur-containing amino acid compared to a corresponding non-transformed cereal plant seed.
107. (Amended) A method for increasing the level of lysine or a sulfur-containing amino acid in a maize seed, the method comprises transforming a maize cell with an expression cassette and regenerating a transformed maize plant to produce a transformed maize seed, wherein the expression cassette comprises a seed endosperm-preferred promoter operably linked to a [plant derived] polynucleotide encoding a plant seed protein [polypeptide], and wherein expression of the plant seed protein [polypeptide] increases the level of lysine or a sulfur-containing amino acid in seed of the transformed maize plant compared to seed of a corresponding non-transformed maize plant.

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108. (Amended) The method of claim 107 wherein the seed endosperm-preferred promoter is heterologous to the [plant derived] polynucleotide.
110. (Amended) A transformed maize seed which has been transformed with a [plant derived] polynucleotide to express a plant seed protein [polypeptide] in the endosperm of the transformed maize seed, wherein the transformed maize seed exhibits an elevated level of lysine or a sulfur-containing amino acid compared to a corresponding non-transformed maize seed.